

Title (en)
POWER CONVERSION DEVICE

Title (de)
STROMWANDLUNGSVORRICHTUNG

Title (fr)
DISPOSITIF DE CONVERSION DE PUISSANCE

Publication
EP 3413456 A4 20190807 (EN)

Application
EP 17747305 A 20170126

Priority
• JP 2016019431 A 20160204
• JP 2017002725 W 20170126

Abstract (en)
[origin: EP3413456A1] A power conversion device capable of controlling a capacitor voltage balance among chopper cells. Each phase arm 2 including chopper cells 3 connected in series and divided into upper and lower arms 21, 22 is connected to a DC power supply via first and fourth switches 41, 44 at both ends. Second and third switches 42, 43 in parallel with the phase arm 2 are connected in series between the first and fourth switches 41, 44. An output terminal 23 is provided between the upper and lower arms 21, 22, a neutral-point 5 is provided between the second and third switches 42, 43, and the neutral-points 5 in respective phases are connected with each other. A controller 6 forms, for each voltage phase, a circuit in which the two phases are connected in parallel, and the phase arm 2 in the other phase is connected in series to the phase arms 2 connected in parallel. The controller 6 superimposes an AC current on a P-N circulating current flowing through such a circuit, and controls the AC current to suppress an imbalance between the upper and lower arms 21, 22.

IPC 8 full level
H02M 7/49 (2007.01); **H02M 7/48** (2007.01); **H02M 7/483** (2007.01)

CPC (source: EP US)
H02M 7/48 (2013.01 - EP); **H02M 7/483** (2013.01 - EP US); **H02M 7/4835** (2021.05 - EP US); **H02M 7/49** (2013.01 - EP)

Citation (search report)
• [E] EP 3188356 A1 20170705 - TOSHIBA KK [JP]
• [XAI] US 2015062991 A1 20150305 - ZHANG DI [US], et al
• [XA] US 2014092661 A1 20140403 - ZHANG DI [US], et al
• [XA] EP 2975749 A1 20160120 - GEN ELECTRIC [US]
• See references of WO 2017135147A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3413456 A1 20181212; EP 3413456 A4 20190807; EP 3413456 B1 20200923; JP 2017139895 A 20170810; JP 6502870 B2 20190417; WO 2017135147 A1 20170810

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